

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. **(Currently Amended)** An isolated peptide comprising a Lol p 1 T cell epitope said peptide comprising at least 5 contiguous amino acids of an amino acid sequence derived or selected from the group consisting of:

- (i) amino acids 19-47;
- (ii) amino acids 73-92;
- (iii) amino acids 100-128;
- (iv) amino acids 127-146;
- (v) amino acids 154-173; and
- (vi) amino acids 181-209;

inclusive, of Lol p 1 or a homolog thereof and wherein said peptide molecule is capable of interacting with T cells and modifying T cell function when incubated with cells from subjects having a condition characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 or a functional derivative, homologue, mutant or analogue of said peptide.

2. **(Currently Amended)** An isolated peptide comprising a Lol p 5 T cell epitope said peptide comprising at least 5 contiguous amino acids of an amino acid sequence derived or selected from the group consisting of:

- (i) amino acids 37-81;
- (ii) amino acids 118-137;
- (iii) amino acids 145-173;
- (iv) amino acids 172-191; and
- (v) amino acids 190-245;

inclusive of Lol p 5 or a homolog thereof; and wherein said peptide molecule is capable of interacting with T cells and modifying T cell function when incubated with cells from

subjects having a condition characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 5 or a functional derivative, homologue, mutant or analogue of said peptide provided that X₂ is not the amino acid sequence 100-119 or 190-209.

3. **(Canceled)**

4. **(Previously Presented)** The isolated peptide according to claim 1 wherein said amino acid sequence is amino acids 19-38 inclusive of Lol p 1 or a homolog thereof.

5. **(Previously Presented)** The isolated peptide according to claim 1 wherein said amino acid sequence is amino acids 28-47 inclusive of Lol p 1 or a homolog thereof.

6. **(Previously Presented)** The isolated peptide according to claim 1 wherein said amino acid sequence is 73-92 inclusive of Lol p 1 or a homolog thereof.

7. **(Previously Presented)** The isolated peptide according to claim 1 wherein said amino acids sequence is amino acids 100-119 inclusive of Lol p 1 or a homolog thereof.

8. **(Previously Presented)** The isolated peptide according to claim 1 wherein said amino acids sequence is amino acids 109-128 inclusive of Lol p 1 or a homolog thereof.

9. **(Previously Presented)** The isolated peptide according to claim 1 wherein said amino acid sequence is amino acids 127-146 inclusive of Lol p 1 or a homolog thereof.

10. **(Canceled)**

11. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 37-56 inclusive of Lol p 5 or a homolog thereof.

12. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 46-65 inclusive of Lol p 5 or a homolog thereof.

13. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 55-74 inclusive of Lol p 5 or a homolog thereof.
14. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid is amino acids 64-83 inclusive of Lol p 5 or a homolog thereof.
15. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid is amino acids 118-137 inclusive of Lol p 5 or a homolog thereof.
16. **(Previously Presented)** The isolated according to claim 2 wherein said amino acid is amino acids 145-164 inclusive of Lol p 5 or a homolog thereof.
17. **(Currently Amended)** The isolated peptide according to claim 1 wherein said amino acid sequence comprises at least 5 amino acids derived from amino acid sequences selected from amino acid sequences selected from the group consisting of:
LDAKSTWYGKPTGAGPKDNG (SEQ ID NO: 5);
GHAFGSMAKKGEEQNVRSA (SEQ ID NO:15);
GSNPNYLAILVKYVDGDGDV (SEQ ID NO:20); and
KESWGAVWRIDTPDKLTGPF (SEQ ID NO:24).
18. **(Previously Presented)** The isolated peptide according to claim 17 wherein said amino acid sequence corresponds substantially to SEQ ID NO:5.
19. **(Currently Amended)** The isolated peptide according to claim 2 wherein said amino acid sequence comprises at least 5 amino acids derived from amino acid sequences selected from the group consisting of:
DVNAGFKA AVAAAAANAPPAD (SEQ ID NO:33);
GELQIVDKIDAAFKIAATAA (SEQ ID NO:45);
DAAFKIAATAANAAPTNDKE (SEQ ID NO:46);
PEVKYAVFEAALTKAITAMT (SEQ ID NO:53); and
AALTKAITAMTQAQKAGKPA (SEQ ID NO:54).

20. **(Previously Presented)** The isolated peptide according to claim 19 wherein said amino acid sequence corresponds substantially to SEQ ID NO:33.
21. **(Previously Presented)** The isolated peptide an according to claim 1 wherein said amino acid sequence is amino acids 181-200 inclusive of Lol p 1 or a homolog thereof.
22. **(Currently Amended)** The isolated peptide according to claims 1 wherein said amino acid sequence is amino acids 190-209 inclusive of Lol p 1 or a homolog thereof.
23. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 154-173 inclusive of Lol p 5 or a homolog thereof.
24. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is acids 172-191 inclusive of Lol p 5 or homolog thereof.
25. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 199-218 inclusive of Lol p 5 or a homolog thereof.
26. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 208-227 inclusive of Lol p 5 or a homolog thereof.
27. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 217-236 inclusive of Lol p 5 or a homolog thereof.
28. **(Previously Presented)** The isolated peptide according to claim 2 wherein said amino acid sequence is amino acids 226-245 inclusive of Lol p 5 or a homolog thereof.
29. **(Currently Amended)** The isolated peptide according to claim 17 wherein said amino acid sequence corresponds substantially to SEQ ID NO:15.
30. **(Previously Presented)** The isolated peptide according to claim 17 wherein said amino acid sequence is corresponds substantially to SEQ ID NO:20.

31. **(Previously Presented)** The isolated peptide according to claim 19 wherein said amino acid sequence corresponds substantially to SEQ ID NO:24.
32. **(Previously Presented)** The isolated peptide according to claim 19 wherein said amino acid sequence corresponds substantially to SEQ ID NO:45.
33. **(Previously Presented)** The isolated peptide according to claim 19 wherein said amino acid sequence corresponds substantially to SEQ ID NO:46.
34. **(Previously Presented)** The isolated peptide according to claim 19 wherein said amino acid sequence corresponds substantially to SEQ ID NO:53.
35. **(Previously Presented)** The isolated peptide according to claim 19 wherein said amino sequence corresponds substantially to SEQ ID NO:54.
36. **(Previously Presented)** The peptide according to claim 1 or 2 wherein said modification of T cell functioning is the induction of T cell differentiation.
37. **(Previously Presented)** The peptide according to claim 1 or 2 wherein said peptide exhibits reduced or ablated IgE binding.
38. **(Previously Presented)** An isolated nucleic acid molecule comprising a sequence of nucleotide encoding or complementary to a sequence encoding the isolated peptide according to claim 1 or 2.
39. **(Previously Presented)** A method for the treatment and/or prophylaxis of a condition in a subject, which condition is characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 and/or Lol p 5, said method comprising administering to said subject an effective amount of a peptide according to claim 1 or 2 for a time and under conditions sufficient to remove or reduce the presence or function of T cells directed to said Lol p 1 and/or Lol p 5 or a functional homolog thereof.

40. **(Original)** The method according to claim 39 wherein said condition is hypersensitivity to a grass pollen of the subfamily Pooideae and even more preferably Rye grass or Timothy grass pollen.

41-44. **(Canceled)**

45. **(Previously Presented)** A pharmaceutical composition comprising a peptide according to claim 1 or 2 together with one or more pharmaceutically acceptable carriers and/or diluents.

46. **(Previously Presented)** A method of diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, said method comprising screening for Lol p 1 and/or Lol p 5 reactive T cells and/or antibodies utilising the peptides according to claim 1 or 2.

47. **(Previously Presented)** The method according to claim 46 wherein said condition is hypersensitivity to a grass pollen of the subfamily Pooideae and even more preferably Rye grass or Timothy grass pollen.

48. **(Currently Amended)** A diagnostic kit for use in ~~46~~-diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, wherein said kit comprises a peptide according to claims 1 or 2.

49. **(Previously Presented)** A method for the treatment and/or prophylaxis of a condition in a subject, which condition is characterised by an aberrant, unwanted or otherwise inappropriate immune response to Lol p 1 and/or Lol p 5, said method comprising administering to said subject an effective amount of a nucleic acid according to claim 38 for a time and under conditions sufficient to remove or reduce the presence or function of T cells directed to said Lol p 1 and/or Lol p 5 or a functional homolog thereof.

50. **(Previously Presented)** A pharmaceutical composition comprising a nucleic acid according to claim 38 together with one or more pharmaceutically acceptable carriers and/or diluents.

51. **(Previously Presented)** A method of diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, said method comprising screening for Lol p 1 and/or Lol p 5 reactive T cells and/or antibodies utilising the nucleic acid according to claim 38.

52. **(Previously Presented)** A diagnostic kit for use in the method of diagnosing or monitoring a condition in a mammal, which condition is characterised by an aberrant, unwanted or inappropriate response to Lol p 1 and/or Lol p 5, wherein said kit comprises a nucleic acid according to claim 38.